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UNCLAS SECTION 01 OF 02 BAGHDAD 003209

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SUBJECT: RECORD BREAKING ELECTRICTY PRODUCTION

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11. SUMMARY: On September 16, 2007, the Ministry of Electricity (ME) set the latest in a series of record-breaking electricity production output levels. For the past five weeks the ME has sustained an upward trajectory of power production, which holds the promise of a new higher overall baseline power production level. System output improvement is largely the result of USG reconstruction programs and the effect of the Surge on repair efforts. In the coming fall and winter months, however, the ME will need to temporarily close generation facilities for planned maintenance. These "planned outages" may curtail current production levels. To mitigate curtailment, the Iraq Transition Assistance Office(ITAO), working with the U.S. Army Corps of Engineers, Gulf Region Division (GRD) is assisting the ME to re-route fuel from the plants closed for maintenance to plants that are idle for lack of available fuel. The Embassy is also helping the ME to facilitate the delivery of \$150 million in diesel fuel that awaits transportation from Kuwait to the Mussayib and Qudas power stations. END SUMMARY.

New Record Highs

- 12. The ME set its all-time electricity output record on September 16, 2007. The system produced 123,430 megawatt hours (MWH), which met 60% of demand nation-wide and 46% of Baghdad's estimated demand. Under the equivalent hours of power calculation, this level of output translates into 11 equivalent hours of power (HOP) supplied to Baghdad and 15 HOP to Iraq outside Baghdad.
- $\P3$ . HOP is an attempt to divide total power output over a 24 hour period to establish some "quality of life" determinant that provides a snapshot of electricity availability to typical consumers. However, it can be misleading because the Iraq grid on a typical day provides nearly 24/7 service to essential service customers, such as hospitals, water plants and some government services facilities, via dedicated lines. Some residential customers are also served by those lines, which supplies them with more actual hours of available electricity than residential customers not served off those essential service lines. Further, in order to ration electricity, the ME must employ rolling blackouts, which affect areas in different way. Therefore, on a given day, some customers get more power than others residing across the street, or across town. For customers willing to pay, private generating units and neighborhood suppliers offer a supplemental market apart from the grid. Some have estimated that supplemental market provides as much as 25% more available power to the market.
- 4.On September 11, 2007 the ME established a new system peak capacity record of 5,530 megawatts (MW), the capacity equivalent of supplying power around the clock to about 5.5 million homes.
- 15. By comparison, the ME's prior output record was set on July, 16 12006. That day the ME supplied 116,000 MWH, which met 34% of Baghdad's demand and 50% of demand outside Baghdad. Under the HOP calculation, production at that level supplied the equivalent of 8 HOP to Baghdad and 12.6 HOP to Iraq outside Baghdad.

- 16. Apart from setting new record highs, the ME has sustained a five week period of production growth, which is now roughly 25% higher than it was a month ago. During this run the ME has set and broken twelve output and/or capacity records. And the grid has produced capacity over 5200 MW every day since early August. For the most part, the ME's production success is due to the effects of USG funded reconstruction programs and the Surge.
- 17. The ME's current output trend may establish a new system production baseline. However, in the short-run output could dip because the ME will soon be shutting down generators to conduct planned maintenance. The ME is working with the Mission to implement actions to mitigate the output suppression effects the maintenance outages may otherwise have on power supply. One is to examine the feasibility of re-routing fuel that would otherwise be burned in the plants closed for maintenance to plants that are now idle for lack of any fuel to power them. Also, the ME, with USG assistance, is working to secure delivery of \$150 million of diesel fuel that it has already purchased from Iraq's Southern Oil Marketing Company (SOMO).

The Reasons for Increased Electricity

- 18. There are five contributing reasons that account for current production success; four are a direct or indirect result of USG programs:
- \* USG-funded (IRRF) and managed (GRD/ITAO) Operations & Maintenance (O&M) programs are yielding an additional 20% of output due to operational efficiencies.

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- \* New Iraqi generation and USG-funded rehabilitated units have come on-line.
- \* Dura Units 5 & 6 (180 MW)
- \* Qudas Four Units (132 MW)
- \* Mussayib Thermal Units (400 MW)
- \* Nasiriyah -Thermal Unit (150 MW)
- \* Mussayib Gas Turbine commissioned (45 MW)
- $\boldsymbol{\ast}$  The Surge has suppressed attacks on infrastructure and repair teams.
- \* Capacity increases have marginally stabilized the network, making it (slightly) more resilient to conditions that would otherwise cause a shut-down.
- $\mbox{\scriptsize \star}$  Finally, cooler weather allows generators to operate more efficiently.

Comment

19. ITAO/Electricity hopes that current output levels reflect the establishment of a new system production baseline. In the short-term, however, the ME must soon begin shutting down some units for planned maintenance. Therefore, unless the capacity lost to maintenance can be replaced, current levels of output will temporarily decline. There are two possible, realistic, mitigating actions available to the ME. Currently, about 450 MW of capacity is idled simply for lack of fuel. The ME has purchased from the Ministry of Oil, through its SOMO production company, \$150 million of diesel fuel, the delivery from Kuwait of which has been delayed pending resolution of a variety of transportation disputes. Officials from our Iraq and Kuwait embassies, working with the ME, are attempting to facilitate a resolution that will liberate the diesel for the Iraqi power plants.

110. GRD and ITAO are also working with the ME to assemble the ME's maintenance plan to assess the feasibility of re-routing fuel from the shuttered-for-maintenance-plants to the idled-for-lack-of-fuel plants during the maintenance period. Success with either or both of these contingencies could provide sufficient capacity to substitute for that lost to the planned outages and sustain the current baseline levels. And, with cooler temperatures around the corner, demand will ease, giving the ME some flexibility and relaxing some stress on the network.

Crocker